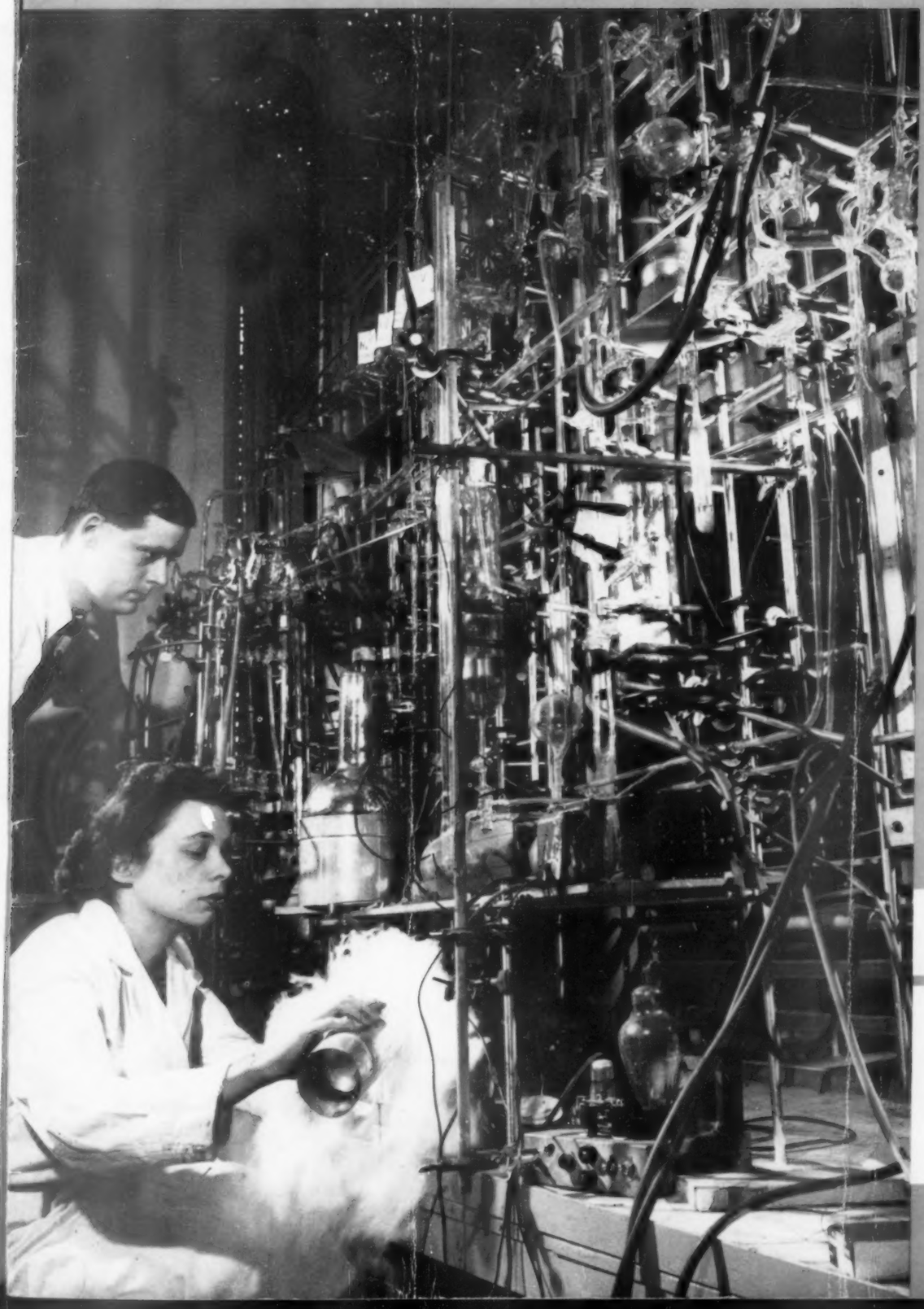
Volume 31 Number 6
MARCH 1949

Route to
EDUCATION
L
11
.S72

# School Life



## IN THIS ISSUE

| | Page |
|---|---|
| New Commissioner of Education . | 1 |
| Educating Our Young Adults . . . | 2 |
| The Heart of Matter . . . . . | 5 |
| Declaration of Human Rights . . . | 8 |
| The Minds of Men . . . . . | 11 |
| National Educational Problems . . | 15 |

FEDERAL SECURITY AGENCY
Office of Education

School Life ★ Official Journal of the Office of Education · · · · · · · · · Federal Security Agency

# CONTENTS for March 1949

Volume 31 Number 6

Cover photograph shows scientists doing research on methods to advance gasoline production from coal. In this particular type of research, radioactive atoms, called istotopes, are used to trace the course of the reaction. By courtesy of Gulf Oil Corporation. See other articles on atomic energy, pages 4–7, 11–13.


| | Page |
|---|---|
| *New Commissioner of Education Named* | 1 |
| *Educating Our Young Adults After School and College* | 2 |
| *Atomic Energy Education* | 4 |
| *Is It True?* | 4 |
| *The Heart of Matter* | 5 |
| *Universal Declaration of Human Rights* | 8 |
| *Research Aids the School Lunch* | 10 |
| *The Minds of Men* | 11 |
| *State Schoolmen Consider National Educational Problems* | 15 |
| *New Books and Pamphlets* | 16 |
| *Selected Theses in Education* | 16 |
| *Educational Aids From Your Government* | *Page 3 of cover* |
| *In Recent Issues of School Life* | *Back cover* |


School Life is indexed in Readers' Guide to Periodical Literature, and in Education Index.

## School Life Spotlight

"Study of the biological, emotional, personal, legal, and economic aspects of marriage are given too little attention in high school." . . . . . p. 2

★ ★ ★

"As tracers, these 'tagged atoms' are proving to be the most useful new tool in research since the microscope was developed three centuries ago. They offer a new mode of perception." . . . . . p. 7

★ ★ ★

"All human beings are born free and equal in dignity and rights. They are endowed with reason and conscience and should act toward one another in a spirit of brotherhood."—Article 1, Universal Declaration of Human Rights. . . . . p. 8

★ ★ ★

"The teacher's responsibility is surely to assist his students and his community in finding positive answers to the question: Can we make an effective social adjustment to changes as they are brought about by atomic energy research?" . . . . . p. 13

★ ★ ★

"The public schools would do well to take greater initiative in building sound programs of education for young adults as a foundation stone of a strong and vigorous America." . . . . . p. 14

Published each month of the school year, October through June.

To order SCHOOL LIFE send your check, money order, or a dollar bill (no stamps) with your subscription request to the Superintendent of Documents, Government Printing Office, Washington 25, D. C. SCHOOL LIFE service comes to you at a school-year subscription price of $1.00. Yearly fee to countries in which the frank of the U. S. Government is not recognized is $1.50. A discount of 25 percent is allowed on orders for 100 copies or more sent to one address within the United States. Printing of SCHOOL LIFE has been approved by the Director of the Bureau of the Budget.

OSCAR R. EWING..... Federal Security Administrator
RALL I. GRIGSBY..... Acting Commissioner of Education
RALPH C. M. FLYNT..... Executive Assistant to the Commissioner
GEORGE KERRY SMITH... Chief, Information and Publications Service
JOHN H. LLOYD..... Assistant Chief, Information and Publications Service

Address all SCHOOL LIFE inquiries to the Chief, Information and Publications Service, Office of Education, Federal Security Agency, Washington 25, D. C.

THE Office of Education was established in 1867 "for the purpose of collecting such statistics and facts as shall show the condition and progress of education in the several States and Territories, and of diffusing such information respecting the organization and management of schools and school systems and methods of teaching, as shall aid the people of the United States in the establishment and maintenance of efficient school systems, and otherwise promote the cause of education throughout the country."

# New Commissioner of Education Named

**PRESIDENT TRUMAN on February 17th appointed Earl James McGrath as Commissioner of Education.**

In announcing the appointment, Oscar R. Ewing, Federal Security Administrator, said that Dr. McGrath will enter on his new duties immediately following his confirmation by the Senate.

Acting Commissioner of Education Rall I. Grigsby has been carrying on these duties since the resignation of John W. Studebaker in July 1948. Born in Buffalo, N. Y., Dr. McGrath graduated from the Buffalo Technical High School in 1920. He received his B. A. degree in 1928 and his M. A. in 1930, both from the University of Buffalo. In 1936, he received his Ph. D. degree from the University of Chicago. The degree of Doctor of Humane Letters was conferred on him by Coe College, Iowa, in 1946.

### War Service

During the last war, Dr. McGrath had the rank of Lieutenant Commander in the U. S. Navy and was Officer in Charge, Educational Services Section, Bureau of Naval Personnel. Enrollment in the educational programs for Navy men, which Dr. McGrath formulated and supervised, reached some 300,000. Through courses primarily in elementary, secondary, and vocational subjects, many young service men and women were enabled to complete high school and receive their diplomas.

In the fall of 1946, Dr. McGrath was a member of a 10-man Mission to Germany to survey the school system in the American-occupied zone. The report prepared by this Mission formed the basis for American policy in German schools throughout the American zone.

### Since College Graduation

With a history of outstanding achievements in the field of education, Dr. McGrath leaves a position as Professor of Education at the University of Chicago to become U. S. Commissioner of Education. Since finishing college he has held positions as Dean of Administration, Lecturer in Psychology, and Professor of Education, University of Buffalo, 1930–33, 1935–38, 1940–45; Specialist in Higher Education, American Council on Education, 1938–40; Lecturer, University of Minnesota, 1940–41; Assistant Chief, Division of Training and Employment, War Manpower Commission, 1942; Dean of College of Liberal Arts, University of Iowa, 1945–48.

In addition to his membership on the Mission to Germany, Dr. McGrath has had a number of other special professional appointments. He is a member of the American Council on Pharmaceutical Education. Under special appointments, he has also served as Member of Staff, Regents' Inquiry Into Character and Cost of Education in New York State; Member, Commission to Survey Education in the State of Utah; Executive Secretary, Survey of Louisiana State University; Consultant to the Teacher Education Commission; Member of Commission to Survey University of Illinois; and Member of President Truman's Commission on Higher Education.

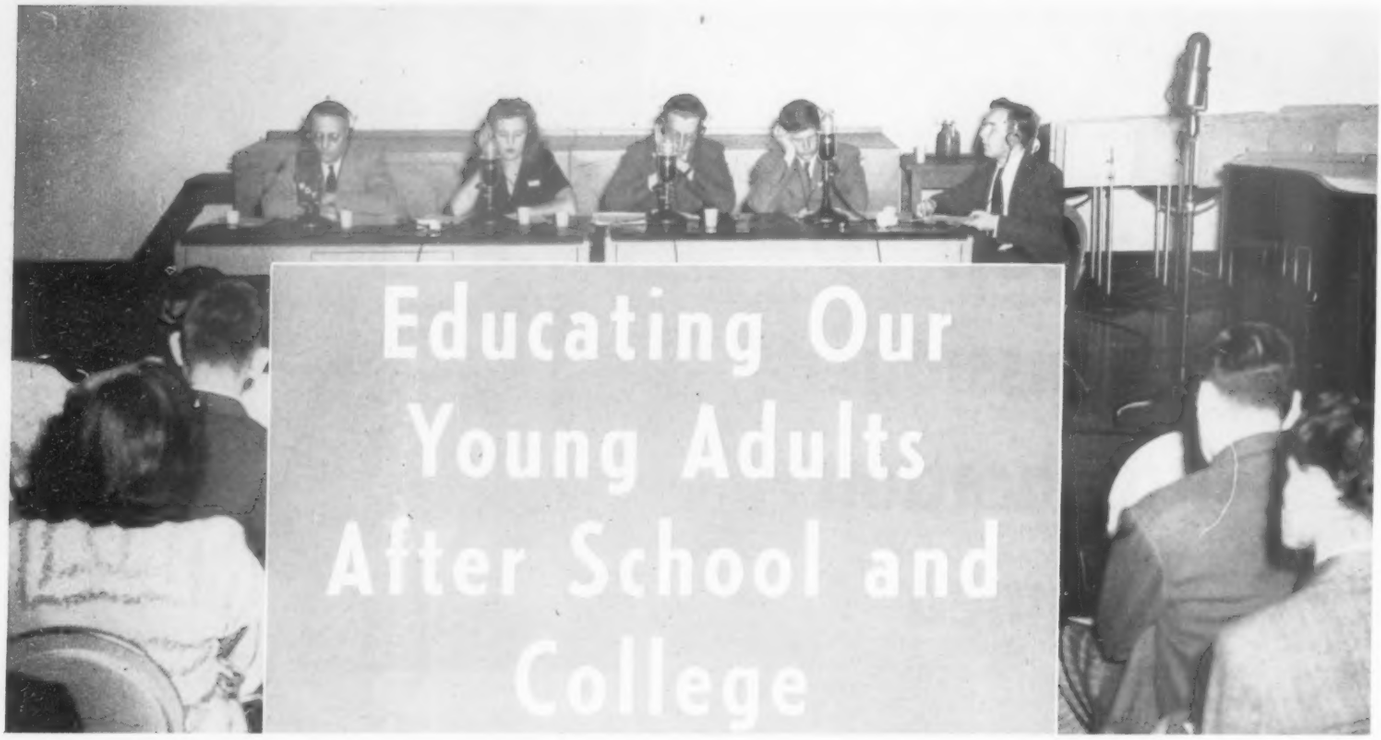
### On President's Commission

As a member of the President's Commission on Higher Education, Dr. McGrath was particularly concerned with the need for extending education at all levels to the underprivileged and minority groups. Among a number of colleges which he serves as consultant are Prairie View State College, Prairie View, Texas, and Bennett College, Greensboro, N. C.

He has been a member of the National Education Association for many years and since 1946 has served on the Executive Committee of the Department of Higher Education. Other learned societies of which he is a member include: Phi Beta Kappa, Sigma Xi, Association for the Advancement of Science, Phi Delta Kappa, Delta Chi, Delta Sigma Pi, and Delta Phi Alpha.

Dr. McGrath is Editor of the *Journal of General Education*. He is the author of a number of books on education, including: *Toward General Education; Science in General Education*, and *Social Science in General Education*.

Dr. McGrath is a resident of Iowa and a member of the Presbyterian Church. He is married to Dorothy Leemon who for 10 years edited the publications of the American Council on Education.



# Educating Our Young Adults After School and College

**Homer Kempfer, Specialist for General Adult and Post-High School Education**

EVERY YEAR from two to two and a half million young people leave our schools through drop-out or graduation to face the three major problems of a lifetime—entrance into the world of work, the establishment of new families, and the acceptance of full responsibility as citizens.

Whether the value of previous schooling in assisting with these problems has been great or small, for most young adults systematic education is no longer in the picture when the crucial young adult years arrive. There are exceptions but for the most part the "prepare for" concept of education still prevails; for most young people organized education ceases when full-time schooling ends. When life patterns of vocation, family life, and citizenship are becoming fixed, organized education all too often is not there—this in spite of the fact that, by their own admission, half of all out-of-school youth would like to continue their education. The unaccrued dividends to society are tremendous.

Take the vocational angle. Schools often do a good job here—with the fourth or fifth of all high school youngsters who are enrolled in federally reimbursed vocational courses. According to one concept of long standing, the schools have a responsibility to help youth—*all* youth—select, prepare for, enter upon, and progress in an occupation. Vocational guidance, where it exists, can assist in occupational selection. Vocational courses help prepare. Few schools help any significant portion of young people enter upon their work, while only a handful follow up to assist young workers to progress in their jobs. After formal schooling, they are left to sink, swim, or flounder largely on their own. In periods of high employment the results may not be dramatic to the casual observer, but most of us remember the 1930's.

## Too Few Being Reached

Figures are less complete for estimating the extent to which the secondary schools assist in the establishment of a satisfactory family life, the cornerstone of our democracy. However, it is known that all too few young people are being reached. Approximately 3,600,000 persons married last year. Most of them were less than 10 years out of school. While many school activities may help prepare for the complexities of modern family living, in high schools specific preparation is largely in homemaking departments. In 1940 an estimated one-third of all girls graduating from high school had not been enrolled in any homemaking courses. It is estimated that nearly 45 percent of all high-school girls in the United States were receiving homemaking instruction during 1946–47, and that at least one-half of these will take one or more additional years of instruction. Only the exceptional school offers homemaking courses for boys.

## Too Little Attention

Study of the biological, emotional, personal, legal, and economic aspects of marriage are given too little attention in high school. Curricula in home economics are increasingly emphasizing the study of child development, consumer-buying, and family relationships. Even so, it is clear that a great deal remains to be done in schools in the preparation for home and family living.

## One Out of Seven

Because of immaturity factors during the secondary years, instruction preparing for marriage and after cannot be completed then. Even if it were possible, most efficient learning would still come when an immediate need is faced. This means a program of family life education for out-of-school youth and adults. In a recent survey of over 3,000 school systems, chiefly of

communities above 2,500 population, approximately one out of seven claimed that it had activities in "family life and parent education" for out-of-school youth and adults, and less than 4 percent reported activities in "preparation for marriage." Regardless of the effectiveness of educational programs in earlier years, obviously most school systems have not accepted responsibility for helping *during* this crucial period.

Systematic education in citizenship, both theoretical and practical, drops to a low ebb as youth leave school. Most studies of the subject show that young people participate relatively little in our common civic life. Even though only recently removed from systematic instruction in citizenship, they tend to register and vote in smaller percentages than middle-aged and older groups.

A great deal of thinking, both lay and professional, is devoted to the "youth" group of high-school age without realization that over 25,000,000 in the next higher age group—between the school years and age 30—have unique needs worthy of special consideration but somewhat different from those of the lower age bracket. A great many communities have teen-canteens and youth programs of various kinds. For the most part they engage the out-of-school time of in-school youth. The New York Youth Commission reaches up to age 21 with its juvenile delinquency prevention activities. Other States have special programs for youth, but relatively few schools do much for young adults except to provide athletic and other physical recreation activities.

## An Educational Vacuum

From the highly organized educational program of the secondary school, young people drop almost into an educational vacuum. Usually after school days only 10 to 15 percent—occasionally 25 percent—of out-of-school young adults up to age 30 maintain participating membership in any formally organized group. The YMCA, 4–H Clubs, certain church groups, and similar organizations, do yeoman's service with a limited number especially in the adolescent years. For the remainder, educational stimulation comes almost entirely from the mass media and from fortuitous individual and small group contacts.

Young adults, although full of energy and idealism, hold few leadership positions; indeed, they find it difficult to participate in groups dominated largely by older and more experienced adults. Not until around age 30 to 35 do they normally start participating in the usual range of community organizations. In general, this age span neither belongs to nor contributes its share to the group life of the community. Young people are busy finding their occupational toeholds and establishing families and often do not turn readily to civic and community affairs, although, from a time viewpoint, they have most to gain.

Certain States and localities have started to explore ways in which these young people can be inducted through educational programs into fuller and earlier participation in community life. Through a properly conceived program geared to their needs, their interest in the future can be built into a great bulwark of American democracy. Possibly the usual lack of an adequate educational program under public auspices partly explains why some at this age become involved in programs not always firmly grounded in American principles. Both fascism and communism have capitalized on the idealism and energy of this young adult group for much of their strength. American democracy can afford to do no less.

For several years the Bureau of Adult Education, New York State Education Department, has been pioneering with this post-school group. Scores of local young adult councils under various names now associate together in a New York State Community Service Council for the carrying on of selected cooperative projects. While local councils usually are "backed" by boards of education, their activities are the antithesis of a school-prescribed program. Young adults select their own projects. A counselor assigned to a group by the school does not teach but provides consultation service and guidance in the best sense and helps the young adults maintain liaison with the older community. A number of councils also have advisory committees of sympathetic adults who help interpret the purposes and activities of the council and support it in other ways.

## What Some Are Doing

Consultants from the Bureau do not suggest activities to local councils; instead they help the young adult groups define their own problems and work out ways of solving them. Sometimes young adults are most conscious of the lack of suitable recreational facilities and start with that as a civic project although they seldom limit themselves to recreation. The Richfield Springs Council, for instance, was instrumental in inducing outside industries to locate in rural Richfield Springs and in having houses numbered. Young adults left in Binghamton during the war took the initiative in the development and coordination of guidance services in the community for returning veterans.

The Schenectady Civic Youth Council has a comprehensive program of activities in

*(Continued on page 14)*

**Schenectady Civic Youth Council conducts weekly radio series, Youth Wants To Know. Photograph on page 1 shows the Council members discussing public affairs by radio with young adults in London.**

# ATOMIC ENERGY EDUCATION

"WE MUST have a generation who understands atomic energy and its implications for a free people . . . This places a new load of responsibility on the leaders of American education," says Willard E. Goslin, president of the American Association of School Administrators.

It is ironical that the people of the United States are so little aware of new knowledge that has already begun to change many aspects of our economy and our society. New techniques in industry, medicine, and agriculture; a new method of keeping time; new conceptions of life processes—these have been accomplished. A new source of power awaits technical development. It is the drama of the Bomb that has obscured these other facts from our view.

In this issue, SCHOOL LIFE presents a few of the major misconceptions about atomic energy in "Is It True?"; and a review of current knowledge about atomic energy, "The Heart of Matter." In accordance with the counsel of David E. Lilienthal that the analyses of policies should come "from a variety of sources," and "not come solely from official sources," SCHOOL LIFE also presents the views of three educators titled "The Minds of Men" on the meaning of atomic energy to all of us.

*Atomic Energy: Here to Stay* is a supplement to this issue. It is a collaboration of the Federal Security Agency, Office of Education, with the United States Atomic Energy Commission. Primarily it contains handles for schools to take hold of in making information about atomic energy development available to boys and girls in our schools, and to adults in our communities. These are discussed in "Where the School Takes Hold," and "How the School Reaches Out." "The Ladder of Atomic Science," "New Facts—New Choices," are other feature articles, along with references, audio-visual aids, and suggestions for exhibits.

*Atomic Energy: Here to Stay* is available from the Superintendent of Documents, Washington 25, D. C., for 10 cents a copy, with the usual discount for quantities.

## Is It True?

*Misconceptions about atomic energy are dangerous: They lead to an unwarranted sense of security.*

**1. Does the United States hold the secret of atomic energy?**

Scientific facts are secrets only until they are discovered. Many basic facts about atomic energy were not discovered in the United States. In 1940 the literature on atomic fission included papers by Fermi (Italy), Bohr (Denmark), Hahn (Germany), Joliot (France), Zeldovich (U. S. S. R.), and scientists of the United States. At that time at least four separate methods for producing fissionable material were generally known. "The real secret," says Selig Hecht in *Explaining the Atom*, "is that there is no basic secret."

**2. Does the United States hold the secrets of the atomic bomb?**

The "secrets" about the bomb are of the same general kind that leads a manufacturer of a cake mix or a new engine, for example, to guard against leaks in his formula or methods of production. It must be remembered that all nations have the Smyth report on the steps leading to development of the bomb. True, many details about the bomb are still "classified," i. e., not released or published. These details include thousands of technical facts about production methods. Much information on the peaceful use of atomic energy is available, but the details about bomb production are not. They are secret. Some scientists have expressed the opinion that if our "secrets" of the details on bomb construction were released, the information might shorten the time for other nations to build the bomb by perhaps a year. Even if the production secrets now held by the British, Canadian, and the United States Governments are not released, scientists estimate that other nations will probably be able to develop their own bomb-making plants in 5 to 15 years, dating from 1945.

*By courtesy of The Washington Post.*

**"I Ain't Got Any Secrets."**

**3. Is atomic energy too difficult for the ordinary person to understand?**

Actually, the basic facts about atomic energy can be taught and are being taught to elementary school children. The schools of Glencoe, Ill., for example, have successfully included instruction about atomic energy in the elementary school grades. Scores of other school systems have made study of atomic energy a part of their school activities.

Even if the teacher—or, for that matter, the student—does not familiarize himself with the scientific fundamentals, he can certainly understand the implications of atomic energy. A general knowledge of airplanes is enough for us to understand how they influence world relations. Most of us can't explain the chemical process of fire, but we had to learn how to keep it under control.

**4. Even if you "understand" atomic energy, can you do anything about it?**

You can do as much or as little about atomic energy as you can do about the tariff, floods, and high prices. Americans *have* done something about all of those, and many other important problems. People make atomic bombs; people decide how atomic energy is to be used. The atom itself exercises no moral judgment. Only people do.

# The Heart of Matter

by William H. Morris and Philip G. Johnson, Office of Education[1]

*"Western civilization, if not the whole world, is now utterly committed to applied science."*

STUART CHASE, *The Proper Study of Mankind*

NO ONE has ever really seen an atom. Perhaps no one ever will. But if you want to see atomic energy being produced in great quantities lift up your head. Look at the sun. There—if the present ideas of scientists are correct—is the mightiest atomic energy machine of all. Our sun and other hot stars.

Only within the past decade—since this year's high school seniors were in the early grades—have astronomers come to general agreement about the source of the sun's energy.

It seems quite obvious, when you think about it, that the sun could not have been "burning," in the usual sense, these millions of years. It would have consumed itself. Scientific evidence now attributes the energy of the sun to an atomic reaction which transforms hydrogen, a light element, into helium, a heavier one, yielding energy in the process. The process is called fusion. It is believed that a whole series of atomic reactions takes place. But the change of matter into energy is the heart of the explanation. These atomic reactions—when billions of billions of atoms are involved—release enormous quantities of energy, as is obvious on any sunny summer day.

In speaking of this concept in 1940, a writer in *The New York Times* said: "In earthly laboratories men have not yet been able to set the process going on a practical scale." Man has been able, however, to put under way another energy-liberating process known as fission (a cleaving or splitting into parts) by using atoms of uranium and other elements.

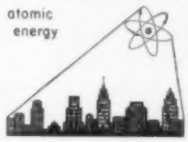
## Architecture of the Atom

Even though no one has ever seen single atoms, we know a great deal about them. Most of our knowledge has come in the past half century. Since the discovery of X-rays in 1895, findings about the nature of matter have come with dizzy speed. If you are more than 50 years old, you were born in the paleozoic age of atomic science. This is where atomic science now stands:

All matter, from this sheet of paper to the walls of China, is composed of one or more of the 96 elements now known. All elements in turn are composed of atoms. Atoms are incredibly small. Millions of them could be lined up on the period at the end of this sentence.

Unpacking radio-iodine. (*University of Chicago.*)

The atom appears to be made up of two parts, an outer shell (or shells, sometimes called a cloud) and a very small but relatively heavy nucleus inside the shell. Small as the atom is, its nucleus rattles around in the shell like a pea in a stadium. The shell is composed of electrons (unit particles of negative electricity). The atoms of each element have a definite number of electrons in their shells (hydrogen 1, helium 2, and uranium 92). The nucleus of the atom (except for normal hydrogen) is composed of two other kinds of particles, protons and neutrons. Protons weigh almost 2,000 times as much as electrons and carry positive charges. Neutrons have about the same weight as protons but carry no electrical charge at all (neutral, as the word neutron suggests).




Because of the relationship of its parts, the atom has been likened to a solar system. In fact, the parallel is rather striking. Think of the nucleus as the "sun" and the electrons as the "planets." And note this: The relative distance between the nucleus and the electrons is roughly comparable to their counterparts in the heavens. The atom, therefore, is mostly space.

## Families of Atoms

Not all atoms even of one element have the same weight. There are hydrogen atoms, for example, of three different weights. The scientist indicates the three hydrogen atoms as H–1, H–2, and H–3. Such atoms are called isotopes (from the Greek words for "same place"). Like most other elements, uranium has several isotopes, principally U–235 and U–238. Thus most elements actually are families of similar (chemically-identical) kinds of atoms.

Even though all atoms of a given element do not weigh the same, they have the same number of electrons. All of the hydrogen isotopes have 1 electron, and all of the uranium isotopes have 92 electrons. Furthermore, all of the hydrogen isotopes have 1 proton in their nuclei, and all uranium isotopes have 92 protons. Where then is the difference between H–1, H–2, and H–3; and between U–235 and U–238?

This is where the neutron comes in: Isotopes of a given element vary in the number of neutrons in their nuclei. For example, U–235 has 143 neutrons in its nucleus (143 plus 92 protons equals 235); U–238 has 146 neutrons (146 plus 92 equals 238). Because neutrons carry no charge, the atom remains electrically in balance—92 electrons and 92 protons. Yet because the neutrons have weight, the isotopes of a given element vary in weight.

All atoms of each element combine with atoms of other elements to form chemical compounds in the same way. H–1, H–2, and H–3 all combine with oxygen atoms to form water. Since H–2, called "heavy hydrogen" or deuterium, exists as 1 part in 5,000 of natural hydrogen, "heavy water" exists in ordinary tap water in ap-

[1] Acting Editor, Information and Publications Service and Specialist for Science, Division of Secondary Education, respectively.

> ***"We do not see how it would be possible under the most favorable circumstances to have any considerable portion of the present power supply of the world replaced by nuclear fuel before the expiration of 20 years."***
>
> —Report to the U. S. Atomic Energy Commission by its General Advisory Committee (J. R. Oppenheimer, Chrm.) (in Fourth Semiannual Report of AEC, 1948, p. 46)

proximately the same proportion. Therefore, we say that all isotopes of an element have the same chemical behavior.

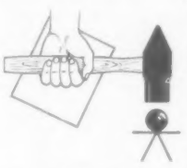
Isotopes are of two kinds, stable and radioactive (nonstable). The latter emit particles and energy, and break down, or "decay," into stable isotopes. Stable isotopes are common; radioactive isotopes (radioisotopes) occur naturally among only a few elements, mostly the heavier ones. Radioactive substances, however, are now produced artificially.

Among the 96 elements now known there are over 800 known isotopes. Carbon, for example, has 5 known isotopes; 2 are both stable and natural, and 3 are radioactive and man-made. Tin has 22 known isotopes.

Artificial production of isotopes was started about 1934. Within a few years, cyclotrons and other particle accelerators had produced radioisotopes of all 83 stable elements. This method was slow and costly. Wartime development of nuclear reactors (atomic piles) made it possible to produce radioisotopes cheaply and in great quantities.

## Origin of Energy

For several decades, since the atom was shown to have a complicated structure, the key question has been: What force holds the atom together? The force that holds the electrons in place in the atom is fairly well understood. It is basically electrical in nature: A given number of electrons (negative) balance the same number of protons (positive). The forces holding the nucleus together, however, are more complex, and very great. A special binding force, in addition to conventional gravitational and electrical forces, must be assumed. The essential nature of that force remains, up to this time, not fully known to us. It is one of the most crucial and tantalizing puzzles in science. Many scientists now think that the puzzle may be solved by the study of mesons. Mesons are another kind of subatomic particle. Although short-lived they are found among the debris left when cosmic rays — the mysterious rays that rain ceaselessly on the earth from outer space—strike atoms in the earth's atmosphere.



The significance of atom-splitting and the size of the force involved can be better understood in light of Einstein's theory that E equals $mc^2$. This says that energy is equal to mass times a very large constant (the speed of light squared). Thus, when an atom (mass) is split so that atoms with different masses are formed, the difference in mass is released in the form of a very large amount of energy. That is what takes place in the sun: 4 hydrogen atoms are greater in mass than 1 helium atom; this difference in mass becomes energy as 4 hydrogen atoms are fused into 1 helium atom in the sun.

> ***". . . the (Atomic Energy) Commission's Advisory Committee on Biology and Medicine stated that the availability of radioisotopes is contributing more than any other factor today to the advancement of medicine and biology."***
>
> —Fourth Semiannual Report, U. S. Atomic Energy Commission, 1948, p. 18.

That also is what happens when uranium atoms are split. In the splitting of the uranium atom to form atoms of barium and krypton, a small amount of mass is unaccounted for. Some of the mass is changed into energy. If the splitting (fission) can be made self-sustaining, as a "chain reaction," it is possible to obtain usable power. The key to the self-sustaining release of energy is the neutron. It has been found that one to three neutrons are released by each uranium atom that is split. These neutrons then become available to split other uranium atoms.

This brings us back to the isotopes. It was found that only U-235 split. U-235 exists in natural uranium only as 1 part in 140 (less than 1 percent). So it was necessary to concentrate the rare U-235 isotope. Suffice it to say that this was done, and it was found possible to control the speed of the chain reaction. As one end-result of this process, the atomic bomb was developed.

## Making Atoms Work for Us

What about use of this energy for other purposes, as for producing power to operate ships or industrial plants? This is clearly possible, although most reliable authorities say that it is still some time away from actuality. Enrico Fermi, who helped to build the first chain-reacting atomic pile, says "atomic power is solely a question of eventual technical development." Some big problems to be solved are: (1) Availability of fissionable material, (2) efficient use of very high temperatures obtained from the

**Radioactive fertilizer to be utilized by corn plants is checked with safety meter for radiation. This work goes on at the Research Division of the U. S. Department of Agriculture at Beltsville, Md.**

reactions, (3) development of structural materials to withstand these high temperatures, (4) recovery of fuel materials from the reactor, (5) disposal of radioactive waste materials from the reactor. Studies today are under way on these and other important technical problems which must be solved before atomic power is available to lighten mankind's burden. Further, because about 90 percent of the effort that goes into obtaining the materials for atomic

*By courtesy The Goodyear Tire & Rubber Co.*

**Radioisotopes aid in measuring thickness.**

power plants is identical with that which goes into the construction of atomic bombs, the problem of international control of atomic energy is critical and urgent.

At present, the greatest application of atomic products comes through the use of radioisotopes. These actually are "tagged atoms" because their presence can be readily detected in the most minute amounts by the use of the Geiger counter and other similar detectors. Radioisotopes are now being used in medical, metallurgical, agricultural, and other research work.

As tracers, these "tagged atoms" are proving to be the most useful new tool in research since the microscope was developed three centuries ago. They offer a *new mode of perception.* For the first time, it is possible to follow in precise detail the fundamental processes of nature—including metabolism, photosynthesis, and the formation of hydrocarbons.

What do we mean by a "new mode of perception?" Briefly, the most minute quantities of radioactive materials can be detected to a degree millions of times more sensitive than by any previously known technique. Moreover, they can be detected at a distance: It is possible now to determine, not only whether certain kinds of cancerous tissue exists in a patient, but also where it is located, and whether it is benign or malignant—all without resorting to surgery. Finally, the technique can be freely used because radioisotopes are cheaply and abundantly available. Radioisotope tracers are rapidly becoming standard laboratory tools. Let us consider briefly their use in only one field, biological research. We have learned that:

Salt moves through the walls of the capillaries of the human body, is carried to the sweat glands, becomes part of the sweat, and is carried to the body surface, all in less than one minute;

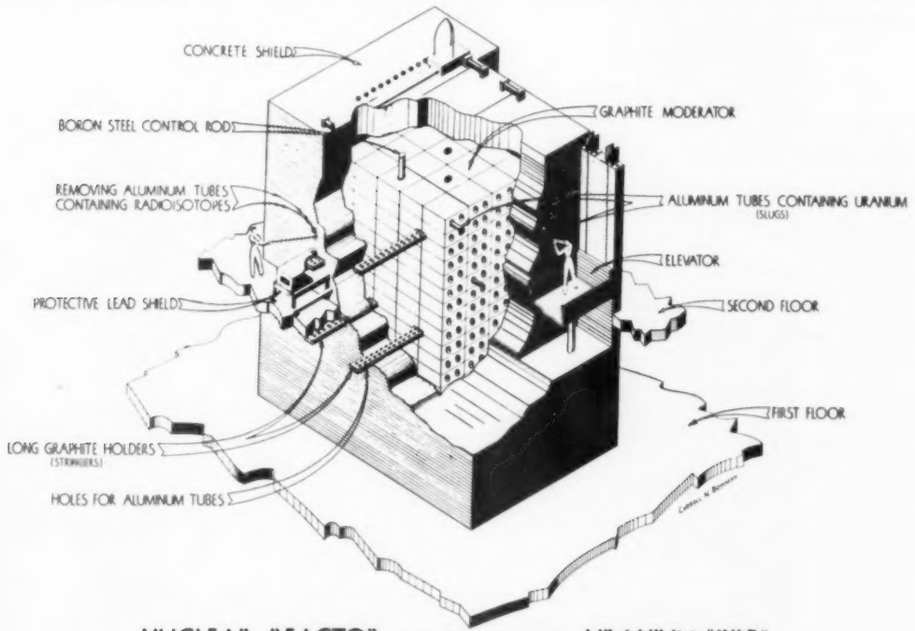
Fluid moves in and out of human blood vessels so rapidly that it carries back and forth with it 50 pounds of salt, on the average, every 24 hours;

About half of the atoms in the human body are replaced each two months. In this sense it is possible to say that each of us gets a new body every few months.

*The extreme rapidity with which those changes take place brings a new concept of life processes that is nothing less than revolutionary.*

Without going into detail, we can merely suggest the value of tracers in agricultural research by reporting that more progress has been made in the study of fertilizers than would have been possible in a decade or two without them.

How our new knowledge will be used poses social and economic problems of the greatest importance to all of us.




**NUCLEAR REACTOR ——— URANIUM "PILE"**

**Note size of reactor by comparing with size of man on elevator.**

## The Geiger-Müller Counter

THE GEIGER-MÜLLER counter is an instrument used for detective work of a most delicate kind—the counting of high energy rays or particles. It consists of a sealed tube, batteries (or some other source of high voltage), and some visible or audible indicator. The sealed tube contains a thin metallic cylinder, about as large as the tube, and a fine wire. The wire, which is insulated from the cylinder, runs through the center of the tube from one end to the other. A gas such as argon, or air at low pressure, fills the tube. In order to prevent damage, the tube is usually mounted in a metal grill or hood.

A high voltage between the wire (+electrode) and metallic cylinder (−electrode) is so adjusted that the tube is on the verge of discharging. When a high energy particle enters the tube, it sets off a sudden pulse or surge of electricity between the electrodes. This flow of electricity is made to operate headphones, clock-like counters, loud-speakers, and other devices.

A typical isotope shipment (carbon 14) from Oak Ridge is 1/300th of an ounce of barium carbonate. In that shipment, 37 million atoms are disintegrating every second. If that small quantity of barium carbonate were distributed among a million rats, the radioactivity would be detectable in each rat.

# Universal Declaration of H

## *Preamble*

**Whereas recognition of the inherent dignity and of the equal and inalienable rights of all members of the human family is the foundation of freedom, justice and peace in the world,**

**Whereas disregard and contempt for human rights have resulted in barbarous acts which have outraged the conscience of mankind, and the advent of a world in which human beings shall enjoy freedom of speech and belief and freedom from fear and want has been proclaimed as the highest aspiration of the common people,**

**Whereas it is essential, if man is not to be compelled to have recourse, as a last resort, to rebellion against tyranny and oppression, that human rights should be protected by the rule of law,**

**Whereas it is essential to promote the development of friendly relations between nations,**

**Whereas the peoples of the United Nations have in the Charter reaffirmed their faith in fundamental human rights, in the dignity and worth of the human person and in the equal rights of men and women and have determined to promote social progress and better standards of life in larger freedom,**

**Whereas member states have pledged themselves to achieve, in cooperation with the United Nations, the promotion of universal respect for and observance of human rights and fundamental freedoms,**

**Whereas a common understanding of these rights and freedoms is of the greatest importance for the full realization of this pledge**

Now therefore

THE GENERAL ASSEMBLY

**PROCLAIMS this Universal Declaration of Human Rights as a common standard of achievement for all peoples and all nations, to the end that every individual and every organ of society, keeping this declaration constantly in mind, shall strive by teaching and education to promote respect for these rights and freedoms and by progressive measures, national and international, to secure their universal and effective recognition and observance, both among the peoples of member states themselves and among the peoples of territories under their jurisdiction.**

## Article 1

**All human beings are born free and equal in dignity and rights. They are endowed with reason and conscience and should act toward one another in a spirit of brotherhood.**

**It is my sincere hope that the United States will take leadership in ratifying the Covenant of the complete Bill of Human Rights. With our Nation's leadership, I believe we can expect ratification of the pact or covenant by other member states of the United Nations more readily. On the other hand I do not anticipate full achievement of the goals set forth in the Declaration for many years, although their discussion in the classroom and in the community should help create a favorable climate for eventual acceptance.**

***—Mrs. Franklin D. Roosevelt***

Chairman, United Nations Human Rights Commission

## Article 2

**1. Everyone is entitled to all the rights and freedoms set forth in this declaration, without distinction of any kind, such as race, color, sex, language, religion, political or other opinion, national or social origin, property, birth or other status.**

**2. Furthermore no distinction shall be made on the basis of the political, jurisdictional or international status of the country or territory to which a person belongs, whether it be independent, trust, non-self-governing or under any other limitation of sovereignty.**

## Article 3

**Everyone has the right to life, liberty and the security of person.**

## Article 4

**No one shall be held in slavery or servitude; slavery and the slave trade shall be prohibited in all their forms.**

## Article 5

**No one shall be subjected to torture or to cruel, inhuman or degrading treatment or punishment.**

## Article 6

**Everyone has the right to recognition everywhere as a person before the law.**

## Articl

**All are equal before the law any discrimination to equal pr are entitled to equal protectio tion in violation of this decl incitement to such discrimination**

## Articl

**Everyone has the right to an competent national tribunals fo mental rights granted him by t**

## Articl

**No one shall be subjected to or exile.**

## Article

**Everyone is entitled in full equ hearing by an independent an the determination of his rights any criminal charge against him**

United States Delegation to United N

# Human Rights

**For *SCHOOL LIFE* readers we are pleased to present this full official wording of the Universal Declaration of Human Rights approved by the United Nations General Assembly Third Session in Paris, France, Dec. 10, 1948.**

## Article 7

re the law and are entitled without
equal protection of the laws. All
protection against any discrimina-
this declaration and against any
crimination.

## Article 8

right to an effective remedy by the
ibunals for acts violating the funda-
him by the Constitution or by law.

## Article 9

jected to arbitrary arrest, detention

## Article 10

in full equality to a fair and public
endent and impartial tribunal, in
his rights and obligations and of
gainst him.

## Article 11

1. Everyone charged with a penal offense has the right to be presumed innocent until proved guilty according to law in a public trial at which he has had all the guarantees necessary for his defence.

2. No one shall be held guilty of any penal offense on account of any act or omission which did not constitute a penal offense, under national or international law, at the time when it was committed. Nor shall a heavier penalty be imposed than the one that was applicable at the time the penal offense was committed.

## Article 12

No one shall be subjected to arbitrary interference with his privacy, family, home or correspondence, nor to attacks upon his honor and reputation. Everyone has the right to the protection of the law against such interference or attacks.

## Article 13

1. Everyone has the right to freedom of movement and residence within the borders of each state.

United Nations General Assembly Second Session. *Official United Nations photographs.*

2. Everyone has the right to leave any country, including his own, and to return to his country.

## Article 14

1. Everyone has the right to seek and to enjoy in other countries asylum from persecution.

2. This right may not be invoked in the case of prosecutions genuinely arising from non-political crimes or from acts contrary to the purposes and principles of the United Nations.

## Article 15

1. Everyone has the right to a nationality.

2. No one shall be arbitrarily deprived of his nationality nor denied the right to change his nationality.

## Article 16

1. Men and women of full age, without any limitation due to race, nationality, or religion, have the right to marry and to found a family. They are entitled to equal rights as to marriage, during marriage, and at its dissolution.

2. Marriage shall be entered into only with the free and full consent of the intending spouses.

3. The family is the natural and fundamental group unit of society and is entitled to protection by society and the state.

## Article 17

1. Everyone has the right to own property alone as well as in association with others.

2. No one shall be arbitrarily deprived of his property.

## Article 18

Everyone has the right to freedom of thought, conscience and religion; this right includes freedom to change his religion or belief, and freedom, either alone or in community with others and in public or private, to manifest his religion or belief in teaching, practice, worship and observance.

## Article 19

Everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers.

## Article 20

1. Everyone has the right to freedom of peaceful assembly and association.

2. No one may be compelled to belong to an association.

## Article 21

**1. Everyone has the right to take part in the Government of his country, directly or through freely chosen representatives.**

**2. Everyone has the right of equal access to public service in his country.**

**3. The will of the people shall be the basis of the authority of Government; this will shall be expressed in periodic and genuine elections which shall be by universal and equal suffrage and shall be held by secret vote or by equivalent free voting procedures.**

## Article 22

**Everyone, as a member of society, has the right to social security and is entitled to the realization, through national effort and international cooperation and in accordance with the organization and resources of each state, of the economic, social and cultural rights indispensable for his dignity and the free development of his personality.**

## Article 23

**1. Everyone has the right to work, to free choice of employment, to just and favorable conditions of work and to protection against unemployment.**

**2. Everyone, without any discrimination, has the right to equal pay for equal work.**

**3. Everyone who works has the right to just and favorable remuneration insuring for himself and his family an existence worthy of human dignity, and supplemented, if necessary, by other means of social protection.**

**4. Everyone has the right to form and to join trade unions for the protection of his interests.**

## Article 24

**Everyone has the right to rest and leisure, including reasonable limitation of working hours and periodic holidays with pay.**

## Article 25

**1. Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control.**

**2. Motherhood and childhood are entitled to special care and assistance. All children, whether born in or out of wedlock, shall enjoy the same social protection.**

## Article 26

**1. Everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages. Elementary education shall be compulsory. Technical and professional education shall be made generally available and higher education shall be equally accessible on the basis of merit.**

**2. Education shall be directed to the full development of the human personality and to the strengthening of respect for human rights and fundamental freedoms. It shall promote understanding, tolerance and friendship among all nations, racial or religious groups, and shall further the activities of the United Nations for the maintenance of peace.**

**3. Parents have a prior right to choose the kind of education that shall be given to their children.**

## Article 27

**1. Everyone has the right freely to participate in the cultural life of the community, to enjoy the arts and to share in scientific advancement and its benefits.**

**2. Everyone has the right to the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author.**

## Article 28

**Everyone is entitled to a social and international order in which the rights and freedoms set forth in this declaration can be fully realized.**

## Article 29

**1. Everyone has duties to the community in which alone the free and full development of his personality is possible.**

**2. In the exercise of his rights and freedoms, everyone shall be subject only to such limitations as are determined by law solely for the purpose of securing due recognition and respect for the rights and freedoms of others and of meeting the just requirements of morality, public order and the general welfare in a democratic society.**

**3. These rights and freedoms may in no case be exercised contrary to the purposes and principles of the United Nations.**

## Article 30

**Nothing in this declaration may be interpreted as implying for any states, groups or persons, any right to engage in any activity or to perform any act aimed at the destruction of any of the rights and freedoms set forth herein.**

---

# Research Aids the School Lunch

AMONG the foods donated from Government purchases to school lunch programs are certain nutritious but less familiar foods such as dried eggs and dry milk. Or they may include potatoes, dried fruits, or some other food which is locally in good supply—foods better known to meal planners and cooks.

But none of these foods need bring problems to the school lunchroom. Tasty, new recipes are called for, it's true. And such recipes—specifically planned to fit school lunch nutrition standards—can be had for the asking. They are the result of work in the school lunch laboratory kitchen of the U. S. Department of Agriculture's Bureau of Human Nutrition and Home Economics.

Recipes, aimed at children's food likes, get large-quantity cooking tests in the same amounts school lunch cooks must also use. Trained food specialists taste and judge the finished product. But there's an important final test—preparation in a real school lunchrom to check the reactions of both the cooks and the youngsters.

Not recipes alone but the results of study on equipment, food quantities, and cost estimates are in print for the use of all concerned with school lunch management. The complete list of school lunch publications follows and may be checked with those already on hand. They may be obtained by writing your State Department of Education:

1. **A Yardstick for School Lunches.** PA–50. August 1944.
2. **Handbook for Workers in School Lunch Programs.** NFC–3. August 1943.
3. **Suggested Outline for Training School Lunch Workers.** May 1948.
4. **School Lunch Facilities—One-Room School.** April 1946.
5. **Small Equipment for the School Lunch.** June 1947.
6. **Planning and Equipping School Lunchrooms.** PA–60. August 1948.
7. **Estimating the Cost of Food for a School Lunch.** PA–53. July 1948.
8. **Quantities of Food for Serving School Lunches.** PA–45. July 1947.
9. **School Lunch Recipes for 100 (recipe file cards).** Distribution limited to persons operating school-lunch programs. Others may purchase for $1 from Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.
10. **School Lunch Recipes Using Potatoes.** PA–36. January 1948.
11. **School Lunch Recipes Using Nonfat Dry Milk.** PA–44. April 1948.
12. **School Lunch Recipes Using Dried Whole Eggs.** PA–58. August 1948.
13. **School Lunch Recipes Using Dried Fruits.** PA–57. August 1948.

**—by Roberta Clark, Information Specialist, Bureau of Human Nutrition and Home Economics.**

# The Minds of Men

by R. Will Burnett, University of Illinois
Ryland W. Crary, Columbia University
Hubert M. Evans, Columbia University[1]

***"Science has brought forth this danger, but the real problem is in the minds and hearts of men."***

ALBERT EINSTEIN, in *The New York Times Magazine*, June 23, 1946.

WHAT ARE the thorny issues emerging from the development of atomic energy? Today's students must soon accept the kind of social responsibility that leaves small margin for error. They need help in analyzing and evaluating the issues connected with atomic energy. It would seem, therefore, that these critical issues must be subjected to the closest scrutiny in every schoolroom in America. The authors hope that their exploration of some of the issues will be helpful to the Nation's teachers.

## Should the A-Bomb Been Used?

Some critics have suggested that a demonstration of the power of the A-bomb could have brought Japan to surrender as quickly as its actual use, but this is generally regarded as an unrealistic appraisal. Former Secretary of War Henry L. Stimson seems to have reduced the American choice to its clearest logic. He indicates that use of the bomb was the logical finale in a total war where the use of 10-ton-block-busters, saturation bombing, and war upon civilians had already been accepted by all belligerents. The problem seems to be reduced to the moral issue of total war itself.

We feel that teachers should not use this question for fruitless discussion of a decision already made and acted upon, but rather as a springboard for considering the problem of human survival. Mankind effectively destroyed many of his civilized works even with his pre-atomic weapons, and the promise of new unconventional instruments of destruction is appalling.

Man's scientific genius remains a two-edged sword. Its cutting edge may be turned against man.

## What About Domestic Control?

In the words of Senator Brien McMahon (Conn.), "After Hiroshima came the dilemma. Would the people who had proved capable of producing the atom bomb be capable of controlling it? Would those who had split the atom be able to prevent the disintegration of our economic, social, and political structure under the impact of atomic energy?"

The Senate delegated 11 Senators "to make a full, complete, and continuing study and investigation with respect to problems relating to the development, use, and control of atomic energy." In October 1945, this special committee went to work. Like most American citizens at that time, the Senators had only limited knowledge about atomic energy, but with the help of the atomic scientists, they reached three conclusions:

First: While not risking such immediate military security as we now possess, we must cooperate with other nations to prevent war.

Second: The dangerous materials used in the release of atomic energy and the facilities for their manufacture must be under strict government control.

Third: Scientific research must be stimulated and encouraged and, above all, it must remain essentially free.

## The Role of the Armed Forces?

Since the national security and a principal weapon of war are involved in the control of atomic energy, it is immediately apparent that the armed forces have a stake in its control. However, certain factors led to the decision not to give our atomic control and development directly to the armed forces. One factor was the reaction of scientists who, accustomed to principles of free and independent research, had for the first time experienced restricting influences in their research and in the dissemination of findings. A second factor was the powerful democratic tradition of the supremacy of the civilian aspect of government.

Security and cooperation with the military are fully protected through the Atomic Energy Act, with the provision for a Military Liaison Committee. But basic control is retained under a civilian agency responsible to the President and the Congress.

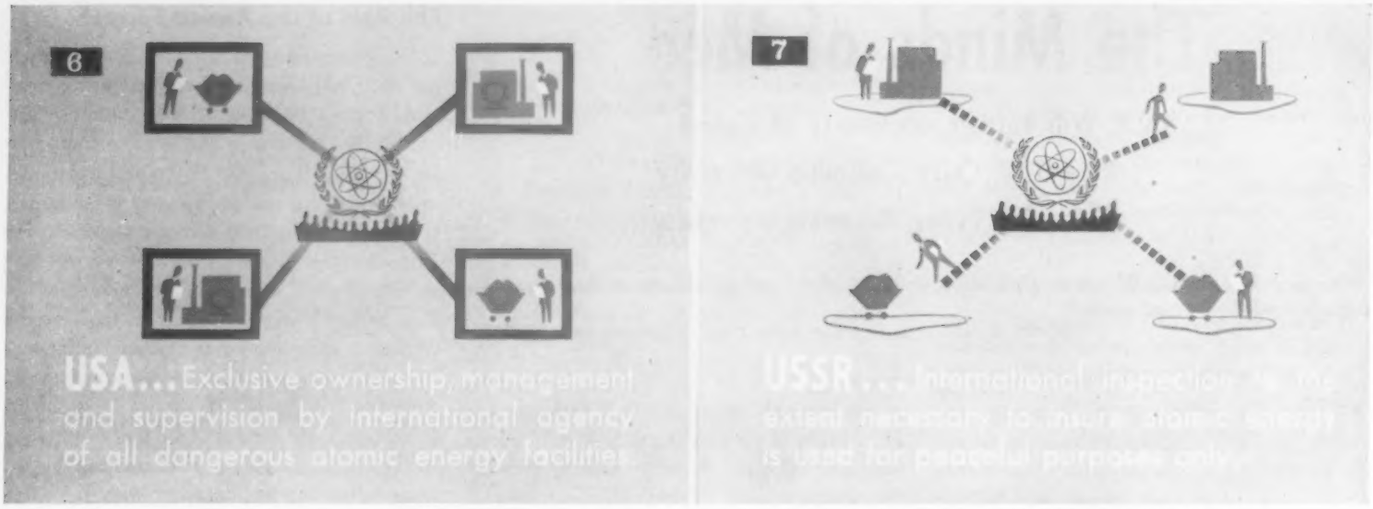
## What About Private Enterprise?

The Atomic Energy Act nationalizes the control of atomic energy. But, at the same time, the act encourages private enterprise by licensing private uses of atomic energy where over-all security is fully guaranteed.

Three principal factors were involved in the decision to place atomic energy under national control: First, the need for an effective security program is clear. Second, tremendous expenditures with no immediate hope of profit are necessary to develop initial facilities. Only the Government can afford such capital outlay, and it is a job we cannot afford to fail to do. Third, with the full potential of this resource still to be explored, it seemed proper that atomic energy should be held in trust for the whole people.

**UN Atomic Energy Commission votes to suspend activities, May 1948. Two representatives (U. S. S. R. and Ukraine) raise hands opposing motion.** *Official United Nations photograph.*

[1] Professor of Science Education, College of Education; Assistant Professor of History, Teachers College; and Associate Professor of Science, Teachers College, respectively, at institution indicated.


6
USA... Exclusive ownership, management and supervision by international agency of all dangerous atomic energy facilities
7
USSR... International inspection to the extent necessary to insure atomic energy is used for peaceful purposes only

UN filmstrip "Atomic Energy—Problems of International Control," shows differences United States and U. S. S. R. control plans.

There remains some dissatisfaction with this arrangement. Some people believe that the national Government has established a dangerous precedent. Some feel that private enterprise should have much greater freedom in developing atomic energy. It is likely that this issue will continue to be with us.

### What Type of Control Was Adopted?

A bill was introduced by Senator McMahon. After much study, on Aug. 1, 1946, the Atomic Energy Act of 1946, sometimes called the McMahon Act, became law.

Briefly, the act provides for a five-man Atomic Energy Commission appointed by the President, subject to the approval of the Senate. The members of the Commission devote their entire time to the problems of the development of atomic energy. Specific provisions, based on the principles of *public ownership* and *civilian control*, include Government monopoly of atomic inventions and patents and all materials and facilities that can be used to produce atomic energy or atomic bombs.

The research of private industry in the uses of atomic energy, provided for through Government contracts and licenses approved by the Commission, can be carried on in public and private institutions or in the laboratories operated by the Commission. For this program, the byproducts of the fissionable materials, the radioisotopes, are released on a priority basis. The industrial use of atomic energy for power and other peacetime purposes remains, however, under Government control. No one can buy fissionable materials.

The AEC controls the research and productive activities related to atomic weapons. This part of the atomic development program is carried forward in cooperation with the National Military Establishment through the Military Liaison Committee.

Even a superficial reading of the brief statement of the main provisions of the Atomic Energy Act (our discussion covers selected main points) will reveal that public ownership and civilian control of atomic energy are definitely and specifically provided for in the act. This does not mean, however, that these issues have been settled for all time.

### Problems of International Control?

Last May, 2 years of discussion, proposal, and counterproposal by the United Nations Atomic Energy Commission ended in a stalemate. The majority plan for international control of atomic energy, sponsored by the United States—an outgrowth of the Acheson-Lilienthal report and the Baruch proposal—ran counter to the minority plan sponsored by Russia.

The central issues are two. The United States desires that a vetoless system of international *ownership and control* (an International Atomic Energy Development Authority) be set up and put in operation before the United States relinquishes its atomic bombs. The Soviet desires that two treaties be signed. One treaty would outlaw the atomic bomb and would require the United States to destroy its present A-bomb stock piles. The other treaty would set up a control system under the Security Council where the veto is in force.

More recently, the problem was thrown into the United Nations Assembly, with the A-bomb currently the No. 1 item on its agenda. Although the strategy of the majority and minority has shifted, the fundamental issues remain the same. It remains to be seen whether or not the "smaller" nations can assume an effective role in resolving this critical problem. [In November 1948, the United Nations Assembly by resolution approved the majority plan, which had been vetoed by Russia; and at Russia's request, called on the United Nations Atomic Energy Commission to continue its work.—Ed.]

The difficulties in the way of an effective plan for international control of atomic energy are many. The most critical ones seem to challenge in one way or another the principle of sovereignty. Others seem to intensify old fears among nations or to create new fears. The very phrase "world control" is abhorrent to the strict nationalist. The idea of world control of atomic energy, with requisite inspections and en-

> ***"Today it is precisely in the departments where our scientific advances have been most decisive, where our technics has been most exquisitely refined—particularly in nuclear physics—that some of the most eminent exponents of science have begun to sound a note of deep anxiety, as they contemplate the social consequences of technical progress."***
>
> —Lewis Mumford, Let Man Take Command, *Saturday Review of Literature*, Oct. 2, 1948.

forcements, comes hard to those schooled in sovereignty regardless of their particular national affiliation or citizenship. But one fact stands out more clearly every day. Adequate control of atomic energy, particularly the control or elimination of its destructive potential, must be established on a world basis. Such are the hard decisions that must be faced by all nations today.

### The Larger Issue

The control of atomic weapons alone will neither assure peace nor deprive total war of its horrors. Incendiary bombs and 10-ton-blockbusters — old-fashioned instruments—have wrought devastation almost beyond belief, and the promise of self-propelled weapons and bacterial warfare is an ominous one. Nevertheless, the effective control of atomic energy is a significant factor in the search for peace. Who can fail to see that atomic fear is a factor in the insupportable state of world tension today? It is surely reasonable to assume that the minimizing of this threat would tend to relieve tension and make possible accord in other areas.

Once the problem is resolved, it is scarcely realistic to assume that aggressive totalitarianism will suddenly become amiable in its dealings with free nations. But there is a margin of hope in which the intelligence of man must operate. It is the hope that the very senselessness of total war which denies to itself no weapons, however devastating, nor any targets, however innocent, will impress itself on the minds of all men.

The road to peace is long. The price of peace, like that of liberty, may be eternal vigilance. The road to world order runs through rugged mountains of crises. The passes are ill-marked, even unexplored. But mankind must refuse to believe that there is no way through. We must act on the assumption that beyond the cliffs and crevasses, beyond the squalls and thunders, there lies a valley in which humanity can live and work out a happier destiny for itself.

### What Are Some Current Developments?

The development of a new major power source inevitably affects the structure of a society. Effective and practical harnessing of atomic energy for power production is certain. Atomic power is unlikely to completely replace other sources of power, but in the next decade or two it is likely to create a total energy source of tremendous proportions.

That major social changes will eventually occur can hardly be denied. The issue is not whether we can gaze into the clouded crystal ball and predict the precise sweep of events to come. It is rather whether or not the American people will develop the understanding and insights to make sound *democratic* planning possible.

Let us consider for a moment the exciting potentialities of atomic energy as a research tool. The fact that radioisotopes or "tagged elements" can be followed in physical and chemical processes means that we have tremendous quantities of easily detected substances. For example, it is possible and even likely that we may learn the secret of the green plant's manufacture of food. If and when we do, the impact on methods of agriculture and on the lives of agricultural workers—and for that matter, all of us—will be nothing less than revolutionary. "Ocean farming" is even being discussed.

There are doubtless many developments before us in the research with radioisotopes. Current investigations are going forward in metabolism; in the nature of energy-producing compounds such as oil and coal; and generally in physiology, bacteriology, chemistry, and medical therapy.

The teacher's responsibility is surely to assist his students and his community in finding positive answers to the question: Can we make an effective social adjustment to changes as they are brought about by atomic energy research?

### Is Social Science Research Lagging?

It is apparent that our genius for scientific development has outrun our ability to adapt our institutions to the use of these discoveries. Indeed, our social lag in this respect was marked long before the spectacular discoveries in nuclear fission.

Fortunately, scientists are coming to the conclusion that there is no real barrier between the natural sciences and social sciences. Witness the fact that many atomic scientists became social scientists when they called the Nation's attention to the social and political implications of these discoveries. Nevertheless, there is a long way to go.

If, as a nation, we are to subsidize scientific development, should we not also be alert to the necessity for discovery and invention in social science—so that our social institutions may more nearly keep pace? But there are two objections made to this argument. One is that society must simply evolve—that it is not possible to plan social adjustments since they are so complex. The second is that the need in social science is not so pressing, and that social advances can be adequately made by the existing organs of political democracy.

In our schools this argument is a tragically neglected issue. It seems to us that the whole problem of social lag is a deadly serious one that the schools cannot afford to ignore. It stands as one of the major objectives of the responsible teacher today.

### What Can the Teacher Do About These Issues?

If the teacher can assist his students in finding authoritative information, his contribution will be endless. If he can assist them in sifting materials critically—so that the irresponsible and false can be discarded—his contribution will be priceless. Helping students to have a reasonable degree of literacy in the field of atomic energy is the teacher's first clear task.

And where will his influence go from there? A hundred different directions. Students can use the "letters to the editor" columns of the local newspaper to stimulate thinking. They can engage others in informal discussion and analysis. They can assist others to obtain written materials of merit. They can obtain competent speakers and arrange discussion groups, forums, and presentations for various service clubs in the community.

Individual persons may find effective action in concert with other persons. They can establish community groups to meet regularly for study, discussion, and analysis. They can call upon the services of existing organizations for educational purposes. Student church groups, for example, have been effective in many communities.

Various psychological blockages may have to be overcome before an individual youngster can become effective. Fear of a vague sort; "What's the use" apathy; and belief that one's own views are unimportant or ineffective in policy decisions are among these blockages. But the teacher must help to overcome them. Here is one place where the old saw, "One learns by doing," may be taken literally. The Atomic Age can become a Frankenstein monster if public apathy and ineptitude become widespread and persistent. The Atomic Age can also become a genuine golden age for democracy. The teacher's deep responsibility would appear to be clear.

## EDUCATING OUR YOUNG ADULTS

(*Continued from page 2*)

the civic, recreational, and family life fields. Frequent radio programs, forums, discussion activities, and hobby and interest groups are organized and conducted. Rotary sponsors a Youth Service Club as a part of the total program. The schools provide counseling services and a testing service in cooperation with the Union College Psychology Laboratory.

In another community, development of a ski run was the first project; another council kept abreast of proposed State legislation; another carried on functional groups in photography, civic planning, dancing, and other interests; another sponsored a series of forums for the entire community, awakening people to the many needs of the town.

### Community Ambassadors

Last summer, as a part of a State-wide project, four communities sent six young people to live for six weeks with European families as "community ambassadors." Out of this experience came a pamphlet, "The Community Project in International Understanding," which outlines procedures for obtaining maximum educational value for the young adults, the local council, and the whole community. This and other materials are available from Rita M. Cowan, Supervisor of Young Adult Services, State Education Department, Albany, N. Y.

The New York idea has several virtues. It is democratic; youth write their own ticket. Nothing is imposed; no national or State preplan tells them what to do or think. Little is done *for* them; they work out their own problems with sympathetic assistance of older adults. Youth live at home; the program develops in its normal setting; activities are integrated naturally into community life. The whole development is geared to increasing participation of young adults in community activities of value to them. It has potentially within it some of the answers needed if a no-work-for-youth situation should again develop.

### Wisconsin Plan

Wisconsin has another plan. Because of the importance of participation in local government in our democracy and the fact that textbooks and the usual civics courses seldom deal concretely with community affairs, Professor R. J. Colbert, University of Wisconsin, over a decade ago started developing a program of new-voter preparation. Manitowoc County tried it out first. The program is designed specifically for each year's crop of 21-year-olds and capitalizes on this psychologically ripe time for a practical type of citizenship education and induction into voting.

Every county superintendent of schools in Wisconsin is made responsible by law for organizing the citizenship-training program. This usually becomes a joint school-community project through the active cooperation and leadership of a variety of service clubs and other community groups. The activities are geared specifically to the practical operation of local government; the program is nonpolitical, nonsectarian, and nonpartisan although it purposely is organized along political boundary lines. Township and ward discussion groups, county conventions of new voters, the development of manuals of local government, mass meetings, and other activities culminate in Citizenship Recognition Day. In recent years this coincides with the national I-Am-An-American Day.

### For Young Voters

Single copies of the "Dane County Guide for Young Voters" and other information may be obtained from Dr. R. J. Colbert, Extension Division, University of Wisconsin, Madison. The Citizenship Committee, National Education Association, 1201 Sixteenth Street NW., Washington 6, D. C., can supply single free copies of "A Guide to New Voters" prepared by young people in the Manitowoc, Wis., program. "Organizing New Voter Programs" and "New Voter Preparation and Recognition," Personal Growth Leaflets Nos. 70 and 100, respectively, are available from the same source at 1 cent each in quantities of 25 or more.

A number of public schools in Wisconsin, Pennsylvania, and other States, serve some of the recreational and social needs of young adults. Illustrative are the extensive programs at Milwaukee and the well-known Young Adult Club at Madison which features dances, a photography club, picnics, skating and toboggan parties, athletic teams, dancing lessons, and an extended list of other recreational activities for those 19 and over. Some characterize the Madison YAC as a peacetime USO (see *Colliers*, May 22, 1948). The idea is being copied and adapted in a number of other places.

Practically all of the schools operating under the supervision of the Wisconsin State Board of Vocational and Adult Education have day and evening classes and activities designed for young adults in the vocational fields. A number have activities designed to improve competence in citizenship, family living and child rearing, use of leisure, and consumer buying.

About 10 years ago young farmers under the leadership of local departments of vocational agriculture started a post-high-school informal education program. Out-of-school young men up to age 30 meet for 15 or more sessions per year. Arkansas, California, South Carolina, and Utah have State-wide organizations of these groups and several other State associations are pending. The war slowed the development of these groups, but recently their growth has been rapid. The nucleus for local groups is often found among the 300,000 veterans participating in the institutional-on-the-farm training program. Similar organizations do not exist on any extensive scale in homemaking, the distributive occupations, and in the trade and industrial occupations.

### On High Priority List

Many other activities for young adults are going on under the sponsorship of the public schools, junior colleges, colleges, the Cooperative Extension Service of the U. S. Department of Agriculture, and numerous other public and private agencies. The progress made in a number of communities in recent years is truly inspiring. An increasing number of schools are doing something, although few are doing as much as they could—and ought. The total number of young adults involved in organized educational activities is still small when compared with the size of this age group. There are enough successful illustrative projects and demonstrations to show the worth-while results obtained when a community puts money and energy into the task. When the intense interest, the great need, and the potential benefits are considered, the young adult field ranks high on a priority list as worthy of major development. The public schools would do well to take greater initiative in building sound programs of education for young adults as a foundation stone of a strong and vigorous America.

---

A super-cyclotron to be built in Berkeley, Calif., will cost about $9,000,000. The machine will accelerate protons almost to the speed of light. Its magnet will require 10,000 tons of steel.

Clyde A. Erwin.

John H. Bosshart.

# State Schoolmen Consider National Educational Problems

NEW PRESIDENT of the National Council of Chief State School Officers, elected at the recent twenty-fifth annual session of the Council at Madison, Wis., is Clyde A. Erwin, State superintendent of public instruction, of North Carolina. Dr. Erwin succeeds John H. Bosshart, New Jersey Commissioner of Education, who, in turn, was elected first vice president of the Council. Miss Jessie M. Parker, superintendent of public instruction of Iowa, was named second vice president.

Top State school officials in attendance at the Madison meeting adopted a number of resolutions calling for action on important educational problems. Among these were the following:

### 1. Federal Aid to Education

The Council again directs attention to the national need of Federal financial aid to elementary and secondary education, to be channeled through the U. S. Office of Education and through the several State education authorities with administrative direction and control reserved by law to the States.

The Council further recommends that Federal grants be made available for school building planning and construction in the several States, Territories, and possessions; that such funds be channeled through the U. S. Office of Education to the chief school officers of the several States, Territories, and possessions; and because it recognizes that great disparities exist among and within the several States with respect to educational need and ability to provide financial means, the Council further recommends that such Federal funds be allocated among the States upon an objective formula that takes account of need and financial ability, and recommends legal provision to allow the apportionment of funds within States according to plans made by the States themselves.

The Council further urges the Federal Government to provide post-high-school scholarships, through the U. S. Office of Education and the State education authorities, to be awarded according to principles that will assure recognition of individual merit and the equalization of educational opportunity.

### 2. Reorganizing Office of Education

The Council reaffirms its conviction that the U. S. Office of Education should be made a separate agency of the Federal Government, under the general direction of a policy-determining board of laymen; that the membership of this board should be chosen on the basis of fitness and without consideration of political party; and that the board should have powers of policy making and appraisal, with authority to appoint the U. S. Commissioner of Education under conditions of employment which will permit selection from among the ablest educational leadership of the Nation; such Commissioner to serve as the principal administrative officer of the board and of the U. S. Office of Education.

The Council further declares its sense of the great importance of competent leadership at the head of the U. S. Office of Education and expresses the belief that such capacity is best demonstrated and tested through public educational experience.

### 3. Federal Educational Activities

The Council believes that the duties and responsibilities of the U. S. Office of Education should be expanded to embrace the conduct or coordination of the educational activities of the Federal Government.

### 4. Vocational Rehabilitation

Inasmuch as vocational rehabilitation is primarily education in the character of the service it performs, the Council affirms its conviction that its governmental setting should be within the educational branch of government, and that the national Office of Vocational Rehabilitation should be returned to the U. S. Office of Education.

The Council further recommends that in every State government the chief State school officer should be designated by law to be the principal executive officer of the agency of vocational rehabilitation.

### 5. Life Adjustment Education

The Council advocates and endorses the principle of universal secondary education as it is expressed in the program of Life Adjustment Education for Youth, and commends the work of the National Commission for its efforts to implement the program; and the Council calls upon its membership to encourage this movement by means of educational programs suited to the distinctive conditions and necessities of the several States, Territories, and possessions.

### 6. Pupils on Federal Lands

The Council recommends that the Federal Government provide financial support for the education of children who reside on Federal property exempt from taxation for school support.

The Council also recorded "its sense of admiration and respect to John W. Studebaker for the wise and courageous leadership he gave to education during his many years as United States Commissioner of Education."

The newly elected board of directors consists of Ralph B. Jones, Arkansas commissioner of education; Rex Putnam, Oregon superintendent of education; Wayne Reed, Nebraska State superintendent; Roy E. Simpson, California superintendent of public instruction, and J. M. Tubb, Mississippi State superintendent.

Resolutions are available from National Council of Chief State School Officers, 1201 Sixteenth St. NW., Washington 6, D. C.

# New Books and Pamphlets

*Claremont College Reading Conference.* Thirteenth Yearbook 1948. Sponsored by the Claremont Graduate School and Alpha Iota Chapter of Pi Lambda Theta. Claremont, Calif., Claremont College Curriculum Laboratory, 1948. 157 p. (Conference Theme: Implementing the Process of Reading Oneself, Other People and Things Which Affect Human Behavior). $2.50.

*The Educational Clinic.* By L. D. Haskew for the Council on Cooperation in Teacher Education. Washington, D. C., American Council on Education, 1949. 51 p. $1.

*Group Work With American Youth.* A Guide to the Practice of Leadership. By Grace Longwell Coyle. New York, Harper and Brothers, 1948. 270 p. $3.50.

*Health Teaching in Schools: For Teachers in Elementary and Secondary Schools.* By Ruth E. Grout. Philadelphia, W. B. Saunders Company, 1948. 320 p. Illus. $4.

*Home Study Blue Book and Directory of Private Home Study Schools and Courses.* A Handbook of Vocational Information for the Use of Counselors and Vocational Guidance Instructors. Approved by the National Home Study Council. Compiled by J. S. Noffsinger. 12th Ed. Washington, D. C., National Home Study Council, 1948. 31 p. Illus.

*Let's Visit Unesco House.* Written by Leonard S. Kenworthy of the Unesco Secretariat. Paris, United Nations Educational, Scientific, and Cultural Organization, 1948. 35 p. Illus. (Unesco Publication 181.)

*Nursing for the Future.* A Report Prepared for the National Nursing Council. By Esther Lucile Brown. New York, Russell Sage Foundation, 1948. 198 p. $2.

*Other Young Americans; Latin America's Young People.* By Delia Goetz. New York, William Morrow and Co., 1948. 255 p. Illus. $3.50.

*The Public Library Plans for the Teen Age.* Prepared by The Committee on Post-War Planning of the American Library Association Division of Libraries for Children and Young People and Its Section, The Young People's Reading Round Table. Chicago, American Library Association, 1948. 86 p. (Planning for Libraries, Number 7) $1.75.

**—Compiled by Susan O. Futterer, Head, Reference and Bibliographical Services, Federal Security Agency Library.**

# Selected Theses in Education

*Ability of Elementary School Children to Interpret Certain Types of Science Experiments. A Critical Analysis of Children's Ability To Interpret Science Experiments in Grades 3–6, Inclusive, in the Cities of Paterson and Clifton, New Jersey.* By Tusin Baker. Doctor's, 1944. New York University. 117 p. ms.

Uses as subjects 201 children in one elementary school of each of the cities. Concludes that children in grades 3–6 can interpret the types of experiments demonstrated, and that their ability increases at each grade level.

*A Concept of School Public Relations and Some Suggestions Concerning its Applications.* By Ruth B. Crone. Master's, 1945. George Washington University. 62 p. ms.

Indicates the need for presenting the value of the school to the public. Sets up criteria for the development and efficient functioning of an educational public relations program.

*The Construction and Evaluation of a Systematic Review of Vocabulary in Beginning Reading.* By Ruth A. Sullivan. Master's, 1946. Boston University. 148 p. ms.

Constructs and evaluates a quick perception method for the systematic review of the pre-primer and primer vocabulary of the Alice and Jerry reading series.

*The Construction of a Test of Scientific Thinking for Grades 5 and 6.* By Leslie S. Clark. Master's, 1946. Boston University. 54 p. ms.

Describes the construction of a pencil and paper test to measure fifth and sixth grade children's ability and skill in the use of elements of the scientific method.

*The Education of Teachers in the Middle States: An Historical Study of Public School Teachers as a State Function.* By Otto W. Snarr. Doctor's, 1945. Chicago University. 408 p.

Attempts to determine the social factors that have conditioned the education of teachers, to determine the nature of the agencies that have supplied teachers to the public schools and their programs, and to determine the trend in teacher education that is manifesting itself in current practices.

*An Educational Experiment to Discover the Extent to Which the Results of Teacher Examinations Are Indices of Teaching Efficiency in Grades 4 to 6, the Growth of Pupils in Reading and Arithmetic as Determined by Standardized Tests.* By Marguerite Tully. Doctor's, 1946. Boston University. 180 p. ms.

Describes an experiment conducted with 37 teachers in grades 4 to 6 of the Providence, R. I., elementary schools, all of whom had been required to take the teacher examinations. Indicates that the teacher-examination scores had no predictive value for the type of teaching measured in this experiment.

*An Experimental Evaluation of Showing a Film Before vs. After a Reading Unit.* By Maryclare Hayes. Master's, 1947. Boston University. 118 p. ms.

Discusses a series of experiments conducted with children in three fifth grades in two different school systems. Indicates a slight but statistically insignificant difference in preference for showing the film after studying the unit.

**—Compiled by Ruth G. Strawbridge, Federal Security Agency Library Bibliographer.**


## Subscription Blank

SUPERINTENDENT OF DOCUMENTS,

*Government Printing Office, Washington 25, D. C.:*

Please send me SCHOOL LIFE for 1 year, and find $1 (check or money order) enclosed as payment.

School superintendents please note: On all orders for 100 copies or more to be sent to one address, there is a discount of 25 percent.

*Name*_____

*Address*_____

*City*_____ *State*_____




U. S. GOVERNMENT PRINTING OFFICE: 1949

# EDUCATIONAL AIDS from Your Government

**Free publications listed on this page should be ordered directly from the agency issuing them. Publications to be purchased should be ordered from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.**

### *Department of Commerce*

**Bureau of the Census, Fact Finder for the Nation.**

Washington, U. S. Government Printing Office, 1948. 50 p. Single copies free from the Bureau of the Census.

**Statistical Abstract of the United States, 1948.** Prepared by Bureau of the Census.

Washington, U. S. Government Printing Office, 1948. 1054 p. $2.75.

### *Federal Security Agency*

**Federal Grants-in-Aid in Health—Education—Social Security.** Selected References 1938–1948. Prepared by Federal Security Agency Library.

Washington, Federal Security Agency Library, December 1948. 19 p. Mimeographed. Free.

**History of the United States Public Health Service, 1798–1948.**

Washington, Public Health Service, 1948. 13 p. Processed. Free.

**Publications of the Children's Bureau.** Prepared by the Children's Bureau.

Washington, U. S. Government Printing Office, 1948. 37 p. Free.

### *Hoover Commission*

**Hoover Commission Reports on Organization of the Executive Branch of the Government.**

Washington, U. S. Government Printing Office, 1949. Advance subscriptions accepted at tentative price, $10.

### *Library of Congress*

**Atomic Energy: Significant References.** Prepared by Legislative Reference Service.

Washington, Library of Congress, 1949. Monthly. Processed. $1.50 per year. For sale through the Card Division, Library of Congress.

**The Constitution of the United States together with An Account of its Travels since September 17, 1787.**

Washington, U. S. Government Printing Office, 1948. 44 p. 15 cents.

**Copyright Law of the United States of America.** Prepared by the Copyright Office.

Washington, U. S. Government Printing Office, 1948. 40 p. (Bulletin 14, 1948 edition.) 15 cents.

**The United States Quarterly Book List.** Prepared by the Library of Congress and published by Rutgers University Press, New Brunswick, N. J. (30 College Avenue). $3.50 per year.

### *National Archives*

**List of National Archives Facsimiles.**

Washington, National Archives, 1948. 2 p. Processed. Free.

**The National Archives—What it is and What it does.**

Washington, National Archives, 1947. 6 p. Processed. (Publication No. 47–7.) Free.

### *President's Committee on Civil Rights*

**To Secure These Rights.**

Washington, U. S. Government Printing Office, 1947. 178 p. $1.

### *Superintendent of Documents*

**Foods and Cooking. Home Economics.**

Washington, U. S. Government Printing Office. (Price List 11—41st Edition, November 1948.) Free.

**National Museum. Smithsonian Institution. Indians.**

Washington, U. S. Government Printing Office. (Price List 55—29th Edition, November 1948.) Free.

### Office of Education

## Printed Publications

**Summaries of Studies in Agricultural Education.** (Vocational Division Bulletin No. 237.) 30 cents.

## Processed Materials

*(Free—Limited Supply)*

**Education of Exceptional Children and Youth.** General References. Elementary Education Division Selected References No. 5–I, November 1948.

**Education of Exceptional Children and Youth. Gifted Children.** Elementary Education Division Selected References No. 5–III, October 1948.

**Education of Exceptional Children and Youth. Delicate Children.** Elementary Education Division Selected References No. 5–IX, April 1947, rerun January 1949.

**Professional Literature for Teachers of Elementary Science.** Elementary Education Division Selected References No. 3, April 1947, rerun January 1949.

**Recommendations for a Building to be Used in Teaching Vocational Agriculture in High Schools.** Division of Vocational Education, Agricultural Education Service, 1948.

**Science Experiment Books for Children.** Elementary Education Division Selected References No. 14, May 1948, rerun January 1949.

**The Major Principles of Physics, Chemistry, and Geology of Importance for General Education.** Secondary Education Division, Selected Science Services, October 1948.

**Work Conference on Life Adjustment Education, October 11–15, 1948.** Report of Participants at the National Conference at Which Twenty-five States and the District of Columbia Were Represented. December 1948.

## Pi Lambda Theta Awards

PI LAMBDA THETA, National Association for Women in Education, again announces the granting of two awards of $400 each for significant research studies on "Professional Problems of Women." For further information write to Alice H. Hayden, Chairman, Committee on Studies and Awards, Education Hall, University of Washington, Seattle, Wash.

*In recent Issues of*

# SCHOOL LIFE

★ ★ ★

## October

Attracting New Teachers—How Some Communities Are Doing It · How Not To Make Headlines · Acts of Congress on Education · Electronic Magic—Use It or You Lose It · Educational Aids From Your Government · Four Thousand Teachers Report on Their Jobs · Landmarks in Vocational Guidance · New Books and Pamphlets · School and College Building Crisis · Life Adjustment Education Conference · Q's and A's · Estimated School Enrollments ·

## November

A Visit to Midwood · Project for Adult Education of Negroes · Plans for Developing a School Building Program · Helping Teachers Keep Happy · Salaries Paid School Librarians in 16 Large Cities · Publishers Support Campaign for Better Schools · True-False Quiz on Class Size · Education Can Change Community Life · Ten-Point Goal To Strengthen Teaching · International Conference on the Crippled · World-Wide Interest in American Education · Recent Theses · New Books · Government Films · Educational Aids From Your Government ·

## December

As a General Becomes a President · How To Increase Surplus Property Utilization · Vocational Education—Democracy in Action · U. S. Navy Occupational Handbook · Low-Cost FM Classroom Radio Receiver Guide · Historic Documents in Facsimile · Life Adjustment Education · What the States Require in 'Education for Freedom' · Appreciating Good Teachers · Zeal for American Democracy Across the Nation · Million Teachers Needed · Educational Aids From Your Government · Theses · New Books and Pamphlets ·

**One Subscription—One Dollar. Order from Superintendent of Documents, Washington 25, D. C.**

## EDUCATING OUR YOUNG ADULTS

(*Continued from page 2*)

the civic, recreational, and family life fields. Frequent radio programs, forums, discussion activities, and hobby and interest groups are organized and conducted. Rotary sponsors a Youth Service Club as a part of the total program. The schools provide counseling services and a testing service in cooperation with the Union College Psychology Laboratory.

In another community, development of a ski run was the first project; another council kept abreast of proposed State legislation; another carried on functional groups in photography, civic planning, dancing, and other interests; another sponsored a series of forums for the entire community, awakening people to the many needs of the town.

### Community Ambassadors

Last summer, as a part of a State-wide project, four communities sent six young people to live for six weeks with European families as "community" ambassadors." Out of this experience came a pamphlet, "The Community Project in International Understanding," which outlines procedures for obtaining maximum educational value for the young adults, the local council, and the whole community. This and other materials are available from Rita M. Cowan, Supervisor of Young Adult Services, State Education Department, Albany, N. Y.

The New York idea has several virtues. It is democratic; youth write their own ticket. Nothing is imposed; no national or State preplan tells them what to do or think. Little is done *for* them; they work out their own problems with sympathetic assistance of older adults. Youth live at home; the program develops in its normal setting; activities are integrated naturally into community life. The whole development is geared to increasing participation of young adults in community activities of value to them. It has potentially within it some of the answers needed if a no-work-for-youth situation should again develop.

### Wisconsin Plan

Wisconsin has another plan. Because of the importance of participation in local government in our democracy and the fact that textbooks and the usual civics courses seldom deal concretely with community affairs, Professor R. J. Colbert, University of Wisconsin, over a decade ago started developing a program of new-voter preparation. Manitowoc County tried it out first. The program is designed specifically for each year's crop of 21-year-olds and capitalizes on this psychologically ripe time for a practical type of citizenship education and induction into voting.

Every county superintendent of schools in Wisconsin is made responsible by law for organizing the citizenship-training program. This usually becomes a joint school-community project through the active cooperation and leadership of a variety of service clubs and other community groups. The activities are geared specifically to the practical operation of local government; the program is nonpolitical, nonsectarian, and nonpartisan although it purposely is organized along political boundary lines. Township and ward discussion groups, county conventions of new voters, the development of manuals of local government, mass meetings, and other activities culminate in Citizenship Recognition Day. In recent years this coincides with the national I-Am-An-American Day.

### For Young Voters

Single copies of the "Dane County Guide for Young Voters" and other information may be obtained from Dr. R. J. Colbert, Extension Division, University of Wisconsin, Madison. The Citizenship Committee, National Education Association, 1201 Sixteenth Street NW., Washington 6, D. C., can supply single free copies of "A Guide to New Voters" prepared by young people in the Manitowoc, Wis., program. "Organizing New Voter Programs" and "New Voter Preparation and Recognition," Personal Growth Leaflets Nos. 70 and 100, respectively, are available from the same source at 1 cent each in quantities of 25 or more.

A number of public schools in Wisconsin, Pennsylvania, and other States, serve some of the recreational and social needs of young adults. Illustrative are the extensive programs at Milwaukee and the well-known Young Adult Club at Madison which features dances, a photography club, picnics, skating and toboggan parties, athletic teams, dancing lessons, and an extended list of other recreational activities for those 19 and over. Some characterize the Madison YAC as a peacetime USO (see *Colliers*, May 22, 1948). The idea is being copied and adapted in a number of other places.

Practically all of the schools operating under the supervision of the Wisconsin State Board of Vocational and Adult Education have day and evening classes and activities designed for young adults in the vocational fields. A number have activities designed to improve competence in citizenship, family living and child rearing, use of leisure, and consumer buying.

About 10 years ago young farmers under the leadership of local departments of vocational agriculture started a post-high-school informal education program. Out-of-school young men up to age 30 meet for 15 or more sessions per year. Arkansas, California, South Carolina, and Utah have State-wide organizations of these groups and several other State associations are pending. The war slowed the development of these groups, but recently their growth has been rapid. The nucleus for local groups is often found among the 300,000 veterans participating in the institutional-on-the-farm training program. Similar organizations do not exist on any extensive scale in homemaking, the distributive occupations, and in the trade and industrial occupations.

### On High Priority List

Many other activities for young adults are going on under the sponsorship of the public schools, junior colleges, colleges, the Cooperative Extension Service of the U. S. Department of Agriculture, and numerous other public and private agencies. The progress made in a number of communities in recent years is truly inspiring. An increasing number of schools are doing something, although few are doing as much as they could—and ought. The total number of young adults involved in organized educational activities is still small when compared with the size of this age group. There are enough successful illustrative projects and demonstrations to show the worth-while results obtained when a community puts money and energy into the task. When the intense interest, the great need, and the potential benefits are considered, the young adult field ranks high on a priority list as worthy of major development. The public schools would do well to take greater initiative in building sound programs of education for young adults as a foundation stone of a strong and vigorous America.

---

A super-cyclotron to be built in Berkeley, Calif., will cost about $9,000,000. The machine will accelerate protons almost to the speed of light. Its magnet will require 10,000 tons of steel.

Clyde A. Erwin.

John H. Bosshart.

# State Schoolmen Consider National Educational Problems

NEW PRESIDENT of the National Council of Chief State School Officers, elected at the recent twenty-fifth annual session of the Council at Madison, Wis., is Clyde A. Erwin, State superintendent of public instruction, of North Carolina. Dr. Erwin succeeds John H. Bosshart, New Jersey Commissioner of Education, who, in turn, was elected first vice president of the Council. Miss Jessie M. Parker, superintendent of public instruction of Iowa, was named second vice president.

Top State school officials in attendance at the Madison meeting adopted a number of resolutions calling for action on important educational problems. Among these were the following:

### 1. Federal Aid to Education

The Council again directs attention to the national need of Federal financial aid to elementary and secondary education, to be channeled through the U. S. Office of Education and through the several State education authorities with administrative direction and control reserved by law to the States.

The Council further recommends that Federal grants be made available for school building planning and construction in the several States, Territories, and possessions; that such funds be channeled through the U. S. Office of Education to the chief school officers of the several States, Territories, and possessions; and because it recognizes that great disparities exist among and within the several States with respect to educational need and ability to provide financial means, the Council further recommends that such Federal funds be allocated among the States upon an objective formula that takes account of need and financial ability, and recommends legal provision to allow the apportionment of funds within States according to plans made by the States themselves.

The Council further urges the Federal Government to provide post-high-school scholarships, through the U. S. Office of Education and the State education authorities, to be awarded according to principles that will assure recognition of individual merit and the equalization of educational opportunity.

### 2. Reorganizing Office of Education

The Council reaffirms its conviction that the U. S. Office of Education should be made a separate agency of the Federal Government, under the general direction of a policy-determining board of laymen; that the membership of this board should be chosen on the basis of fitness and without consideration of political party; and that the board should have powers of policy making and appraisal, with authority to appoint the U. S. Commissioner of Education under conditions of employment which will permit selection from among the ablest educational leadership of the Nation; such Commissioner to serve as the principal administrative officer of the board and of the U. S. Office of Education.

The Council further declares its sense of the great importance of competent leadership at the head of the U. S. Office of Education and expresses the belief that such capacity is best demonstrated and tested through public educational experience.

### 3. Federal Educational Activities

The Council believes that the duties and responsibilities of the U. S. Office of Education should be expanded to embrace the conduct or coordination of the educational activities of the Federal Government.

### 4. Vocational Rehabilitation

Inasmuch as vocational rehabilitation is primarily education in the character of the service it performs, the Council affirms its conviction that its governmental setting should be within the educational branch of government, and that the national Office of Vocational Rehabilitation should be returned to the U. S. Office of Education.

The Council further recommends that in every State government the chief State school officer should be designated by law to be the principal executive officer of the agency of vocational rehabilitation.

### 5. Life Adjustment Education

The Council advocates and endorses the principle of universal secondary education as it is expressed in the program of Life Adjustment Education for Youth, and commends the work of the National Commission for its efforts to implement the program; and the Council calls upon its membership to encourage this movement by means of educational programs suited to the distinctive conditions and necessities of the several States, Territories, and possessions.

### 6. Pupils on Federal Lands

The Council recommends that the Federal Government provide financial support for the education of children who reside on Federal property exempt from taxation for school support.

The Council also recorded "its sense of admiration and respect to John W. Studebaker for the wise and courageous leadership he gave to education during his many years as United States Commissioner of Education."

The newly elected board of directors consists of Ralph B. Jones, Arkansas commissioner of education; Rex Putnam, Oregon superintendent of education; Wayne Reed, Nebraska State superintendent; Roy E. Simpson, California superintendent of public instruction, and J. M. Tubb, Mississippi State superintendent.

Resolutions are available from National Council of Chief State School Officers, 1201 Sixteenth St. NW., Washington 6, D. C.

# New Books and Pamphlets

*Claremont College Reading Conference.* Thirteenth Yearbook 1948. Sponsored by the Claremont Graduate School and Alpha Iota Chapter of Pi Lambda Theta. Claremont, Calif., Claremont College Curriculum Laboratory, 1948. 157 p. (Conference Theme: Implementing the Process of Reading Oneself, Other People and Things Which Affect Human Behavior). $2.50.

*The Educational Clinic.* By L. D. Haskew for the Council on Cooperation in Teacher Education. Washington, D. C., American Council on Education, 1949. 51 p. $1.

*Group Work With American Youth.* A Guide to the Practice of Leadership. By Grace Longwell Coyle. New York, Harper and Brothers, 1948. 270 p. $3.50.

*Health Teaching in Schools: For Teachers in Elementary and Secondary Schools.* By Ruth E. Grout. Philadelphia, W. B. Saunders Company, 1948. 320 p. Illus. $4.

*Home Study Blue Book and Directory of Private Home Study Schools and Courses.* A Handbook of Vocational Information for the Use of Counselors and Vocational Guidance Instructors. Approved by the National Home Study Council. Compiled by J. S. Noffsinger. 12th Ed. Washington, D. C., National Home Study Council, 1948. 31 p. Illus.

*Let's Visit Unesco House.* Written by Leonard S. Kenworthy of the Unesco Secretariat. Paris, United Nations Educational, Scientific, and Cultural Organization, 1948. 35 p. Illus. (Unesco Publication 181.)

*Nursing for the Future.* A Report Prepared for the National Nursing Council. By Esther Lucile Brown. New York, Russell Sage Foundation, 1948. 198 p. $2.

*Other Young Americans; Latin America's Young People.* By Delia Goetz. New York, William Morrow and Co., 1948. 255 p. Illus. $3.50.

*The Public Library Plans for the Teen Age.* Prepared by The Committee on Post-War Planning of the American Library Association Division of Libraries for Children and Young People and Its Section, The Young People's Reading Round Table. Chicago, American Library Association, 1948. 86 p. (Planning for Libraries, Number 7) $1.75.

**—Compiled by Susan O. Futterer, Head, Reference and Bibliographical Services, Federal Security Agency Library.**

# Selected Theses in Education

*Ability of Elementary School Children to Interpret Certain Types of Science Experiments. A Critical Analysis of Children's Ability To Interpret Science Experiments in Grades 3–6, Inclusive, in the Cities of Paterson and Clifton, New Jersey.* By Tusin Baker. Doctor's, 1944. New York University. 117 p. ms.

Uses as subjects 201 children in one elementary school of each of the cities. Concludes that children in grades 3–6 can interpret the types of experiments demonstrated, and that their ability increases at each grade level.

*A Concept of School Public Relations and Some Suggestions Concerning its Applications.* By Ruth B. Crone. Master's, 1945. George Washington University. 62 p. ms.

Indicates the need for presenting the value of the school to the public. Sets up criteria for the development and efficient functioning of an educational public relations program.

*The Construction and Evaluation of a Systematic Review of Vocabulary in Beginning Reading.* By Ruth A. Sullivan. Master's, 1946. Boston University. 148 p. ms.

Constructs and evaluates a quick perception method for the systematic review of the pre-primer and primer vocabulary of the Alice and Jerry reading series.

*The Construction of a Test of Scientific Thinking for Grades 5 and 6.* By Leslie S. Clark. Master's, 1946. Boston University. 54 p. ms.

Describes the construction of a pencil and paper test to measure fifth and sixth grade children's ability and skill in the use of elements of the scientific method.

*The Education of Teachers in the Middle States: An Historical Study of Public School Teachers as a State Function.* By Otto W. Snarr. Doctor's, 1945. Chicago University. 408 p.

Attempts to determine the social factors that have conditioned the education of teachers, to determine the nature of the agencies that have supplied teachers to the public schools and their programs, and to determine the trend in teacher education that is manifesting itself in current practices.

*An Educational Experiment to Discover the Extent to Which the Results of Teacher Examinations Are Indices of Teaching Efficiency in Grades 4 to 6, the Growth of Pupils in Reading and Arithmetic as Determined by Standardized Tests.* By Marguerite Tully. Doctor's, 1946. Boston University. 180 p. ms.

Describes an experiment conducted with 37 teachers in grades 4 to 6 of the Providence, R. I., elementary schools, all of whom had been required to take the teacher examinations. Indicates that the teacher-examination scores had no predictive value for the type of teaching measured in this experiment.

*An Experimental Evaluation of Showing a Film Before vs. After a Reading Unit.* By Maryclare Hayes. Master's, 1947. Boston University. 118 p. ms.

Discusses a series of experiments conducted with children in three fifth grades in two different school systems. Indicates a slight but statistically insignificant difference in preference for showing the film after studying the unit.

**—Compiled by Ruth G. Strawbridge, Federal Security Agency Library Bibliographer.**


## Subscription Blank

SUPERINTENDENT OF DOCUMENTS,

*Government Printing Office, Washington 25, D. C.:*

Please send me SCHOOL LIFE for 1 year, and find $1 (check or money order) enclosed as payment.

School superintendents please note: On all orders for 100 copies or more to be sent to one address, there is a discount of 25 percent.

*Name*_____

*Address*_____

*City*_____ *State*_____




U. S. GOVERNMENT PRINTING OFFICE: 1949